REMARKS

Applicant respectfully requests allowance of the subject application.

Claims 1-17 and 21-24 are amended, support for which may be found throughout the specification and drawings as filed, such as in the title of the subject Application and FIG. 6 and the related discussion.

Claims 1-44 are pending.

In view of the following remarks, Applicant respectfully requests that the rejections be withdrawn and the application be forwarded along to issuance

§ 101 Rejection

Claims 1-44 stand rejected under 35 U.S.C. § 101 as being nonstatutory subject matter. The Applicant respectfully traverses the rejection.

The Office gives guidance to the requirements of 35 U.S.C. §101 as follows in the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" published on November 22, 2005 in the Official Gazette, a portion of which is excerpted as follows:

> b. Practical Application That Produces a Useful, Concrete, and Tangible Result
>
> For eligibility analysis, physical transformation "is not an invariable requirement, but merely one example of how a mathematical algorithm [or law of nature] may bring about a useful application." AT&T, 172 F.3d at 1358-59, 50 USPQ2d at 1452. If the examiner determines that the claim does not entail the transformation of an article, then the examiner shall review the claim to determine if the claim provides a practical application that produces a useful, tangible and concrete

result. In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." The claim must be examined to see if it includes anything more than a Sec. 101 judicial exception. If the claim is directed to a practical application of the Sec. 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. Sec. 101. If the examiner does not find such a practical application, the examiner has determined that the claim is nonstatutory.

In determining whether a claim provides a practical application that produces a useful, tangible, and concrete result, the examiner should consider and weigh the following factors:

(1) "USEFUL RESULT"

For an invention to be "useful" it must satisfy the utility requirement of section 101. The USPTO's official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. MPEP Sec. 2107 and Fisher, 421 F.3d at ___, 76 USPQ2d at 1230 (citing the Utility Guidelines with approval for interpretation of "specific" and "substantial"). In addition, when the examiner has reason to believe that the claim is not for a practical application that produces a useful result, the claim should be rejected, thus requiring the applicant to distinguish the claim from the three Sec. 101 judicial exceptions to patentable subject matter by specifically reciting in the claim the practical application. In such cases, statements in the specification describing a practical application may not be sufficient to satisfy the requirements for section 101 with respect to the claimed invention. Likewise, a claim that can be read so broadly as to include statutory and nonstatutory subject matter must be amended to limit the claim to a practical application. In other words, if the specification discloses a practical application of a Sec. 101 judicial exception, but the claim is broader than the disclosure

such that it does not require a practical application, then the claim must be rejected.

(2) "TANGIBLE RESULT"

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a Sec. 101 judicial exception, in that the process claim must set forth a practical application of that Sec. 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application."). "[A]n application of a law of nature or mathematical formula to a . . . process may well be deserving of patent protection." Diehr, 450 U.S. at 187, 209 USPQ at 8 (emphasis added); see also Corning, 56 U.S. (15 How.) at 268, 14 L.Ed. 683 ("It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted . . ."). In other words, the opposite meaning of "tangible" is "abstract."

(3) "CONCRETE RESULT"

Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. In other words, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. In re Swartz, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000) (where asserted result produced by the claimed invention is "irreproducible" claim should be rejected under section 101). The opposite of "concrete" is unrepeatable or unpredictable. Resolving this question is dependent on the level of skill in the art. For example, if the claimed invention is for a process which requires a particular skill, to determine whether that process is substantially repeatable will necessarily require a determination of the level of skill of the ordinary artisan in that field. An appropriate rejection under 35 U.S.C. Sec. 101 should be accompanied by a lack of enablement rejection under 35 U.S.C. Sec. 112, paragraph 1, where the invention

cannot operate as intended without undue experimentation. See infra.

Claim 1 has been amended, and as amended (portions of the amendment appear in bold/italics below), recites a ***computer-implemented*** method comprising:

- obtaining a set of training data having associated summaries;
- using the set of training data and associated summaries to generate a key feature generation model;
- obtaining another set of training data having associated categories;
- mapping, using the key feature generation model, the other set of training data to a set of vectors; and
- training a data classifier based on the set of vectors and the associated categories*; and*
- ***classifying data using the trained data classifier***.

Support for the amendment may be found throughout the specification and drawings as filed, an example of which may be found in FIG. 6 and the related discussion as well as the title of the subject Application. Claim 1, as amended, recites a computer-related process and a practical application, and thus, is statutory under 35 U.S.C. Section 101 as producing a useful, tangible and concrete result and as reciting a computer-related process having a practical application in the technological arts. *See MPEP2106(IV)(B)(2)(b)(ii)*. Withdrawal of the rejection is respectfully requested.

Claims 2-18 depend either directly or indirectly from Claim 1 and are allowable as depending from an allowable base claim. Each of the dependent claims is allowable based on the same rationale discussed with respect to Claim 1. Withdrawal of the rejection is respectfully requested.

Claim 19 recites one or more computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors of a device, causes the one or more processors to:

- obtain a set of training text having associated summaries;
- use the set of training text and associated summaries to generate a keyword generation model;
- obtain another set of training text having associated categories;
- map, using the keyword generation model, the other set of training text to a set of vectors; and
- train a text classifier based on the set of vectors and the associated categories.

As stated in the MPEP, "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. *See MPEP 2106, (IV)(B)(1).* Accordingly, because claim 19 recites one or more computer readable media having functional material (e.g., "obtain a set of training text having associated summaries"; "use the set of training text and associated summaries to generate a keyword generation model"; "obtain another set of training text having associated categories"; "map, using the keyword generation model, the other set of training text to a set of vectors"; and "train a text classifier based on the set of vectors and the associated categories"), this claim meets the requirements of 35 U.S.C. § 101 as being statutory subject matter, withdrawal of the rejection is respectfully requested.

Claims 19 and 20 depend directly from Claim 18 and is allowable as depending from an allowable base claim. These claims are allowable based on the same rationale discussed with respect to Claim 18. Withdrawal of the rejection is respectfully requested.

Claim 21 has been amended, and as amended (portions of the amendment appear in bold/italics below), recites a ***computer-implemented*** method comprising:

- receiving data to be classified;
- using a key feature generation model to obtain a vector representing the data, wherein the key feature generation model is based on a set of training data having associated summaries; and
- inputting the obtained vector to a trained data classifier, wherein the trained data classifier was previously trained using the set of training data and associated summaries.

Support for the amendment may be found throughout the specification and drawings as filed, an example of which may be found in FIG. 6 and the related discussion as well as the title of the subject Application. Claim 21, as amended, recites a computer-related process and a practical application. Thus, this claim is statutory under 35 U.S.C. Section 101 as producing a useful, tangible and concrete result as recited in the Official Gazette above and as reciting a computer-related process that recites a practical application in the technological arts. *See MPEP2106(IV)(B)(2)(b)(ii).* Withdrawal of the rejection is respectfully requested.

Claims 22-24 depend either directly or indirectly from Claim 21 and are allowable as depending from an allowable base claim. Each of the dependent

claims is allowable based on the same rationale discussed with respect to Claim 21. Withdrawal of the rejection is respectfully requested.

Claim 25 recites one or more computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors of a device, causes the one or more processors to:

- train a text classifier using multiple pieces of training text, a plurality of summaries wherein each of the plurality of summaries is associated with one of the multiple pieces of training text, and a plurality of categories wherein each of the plurality of categories is associated with one of the multiple pieces of training text; and
- use the trained text classifier to classify input text without an associated summary.

As stated in the MPEP, "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. *See MPEP 2106, (IV)(B)(1).* Accordingly, because claim 35 recites one or more computer readable media having functional material, this claim meets the requirements of 35 U.S.C. § 101 as being statutory subject matter, withdrawal of the rejection is respectfully requested.

Claims 26-29 depend either directly or indirectly from Claim 25 and are allowable as depending from an allowable base claim. Each of the dependent claims is allowable based on the same rationale discussed with respect to Claim 25. Withdrawal of the rejection is respectfully requested.

Claim 30 recites a system comprising:

- a stochastic key feature generation model training module to generate a trained model based on a first training set, wherein the first training set includes training data and associated summaries;
- a training data mapping module to generate a plurality of vectors based on the trained model and a second training set, wherein the second training set includes training data and associated categories; and
- a classifier training module to construct a trained classifier based on the plurality of vectors and the second training set.

This claim clearly complies with 35 U.S.C. § 101 as a practical result is obtained, e.g., a trained classifier. Withdrawal of the rejection is respectfully requested.

Claims 31-39 depend either directly or indirectly from Claim 30 and are allowable as depending from an allowable base claim. Each of the dependent claims is allowable based on the same rationale discussed with respect to Claim 30. Withdrawal of the rejection is respectfully requested.

Claim 40 recites a system comprising:

- a stochastic key feature generation model-based vector generation module to generate a vector based on input data and a stochastic key feature generation model, wherein the stochastic key feature generation model was previously generated based on training data and associated summaries; and
- a classifier to receive the vector and, based on the vector, classify the input data into one or more classes.

This claim clearly complies with 35 U.S.C. § 101. Withdrawal of the rejection is respectfully requested.

Claims 41-42 depend either directly or indirectly from Claim 40 and are allowable as depending from an allowable base claim. Each of the dependent claims is allowable based on the same rationale discussed with respect to Claim 40. Withdrawal of the rejection is respectfully requested.

Claim 43 recites a system comprising:

- means for generating a trained model based on a first training set, wherein the first training set includes training data and associated summaries;
- means for generating a plurality of vectors based on the trained model and a second training set, wherein the second training set includes training data and associated categories; and
- means for constructing a trained classifier based on the plurality of vectors and the second training set.

This claim clearly complies with 35 U.S.C. § 101, e.g., this claim is in compliance § 112, second . Withdrawal of the rejection is respectfully requested.
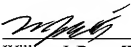
    Claim 44 depends directly from Claim 43 and is allowable as depending from an allowable base claim. Each of the dependent claims is allowable based on the same rationale discussed with respect to Claim 43. Withdrawal of the rejection is respectfully requested.

Conclusion

All of the claims are in condition for allowance. Accordingly, Applicant requests a Notice of Allowability be issued forthwith. If the Office's next anticipated action is to be anything other than issuance of a Notice of Allowability, Applicant respectfully requests a telephone call for the purpose of scheduling an interview.

Respectfully Submitted,

Dated: _10/9/6_   By: _____

William J. Breen III
Reg. No. 45,313
(509) 324-9256 x249